

Notice of Intent No. DE-FOA-0001708

Notice of Intent to Issue Funding Opportunity Announcement No. DE-FOA-0001628

The Office of Energy Efficiency and Renewable Energy (EERE) intends to issue, on behalf of the Bioenergy Technologies Office, a Funding Opportunity Announcement (FOA) entitled “Productivity Enhanced Algae and Tool-Kits (PEAK).”

This FOA will support an applied research focus on biological variables which contribute most greatly to the modeled minimum fuel selling price of algal biofuels. These biological variables include: biomass productivity; biomass composition (e.g., lipid, protein, and carbohydrate content); predation and pathogen resistance; halotolerance; heat and cold tolerance; and high-intensity light (i.e., direct sunlight) tolerance. Supporting advanced biology research approaches to enable high productivity in applied “field setting” cultivation conditions that are representative of future scaled-up cultivation conditions will accelerate progress towards EERE’s technical milestones for algal biofuels and will fill a gap between bench-scale research and pre-pilot efforts. Improved and more environmentally robust strains are necessary for breakthrough reductions in algal biofuel costs. This FOA seeks to fund multidisciplinary biological innovation that will deliver strains, tools, data, and techniques to enhance algal biofuel potential and enable accelerated future innovation in algal biofuels and bioproducts.

It is anticipated that the FOA may include the following Areas of Interest:

Area of Interest One, Strain Improvement: Development of enhanced algal strains with increased areal productivity and biofuel intermediate yield.

Strain improvement developments will include isolation, directed evolution, breeding, and/or genetic engineering of novel algal strains that can reproducibly out-perform the current best available strains in outdoor conditions, where “performance” is represented by productivity, robustness, and composition.

Area of Interest Two, Cultivation Improvement: Development of increased areal productivity and biofuel intermediate yield through enhanced management of ecological or abiotic contributions to cultivation biology.

Cultivation biology development improvements will include leveraging natural or designed microbial assemblages of the cultivation ecosystem to boost performance and exclude pathogens, and understanding under what cultivation conditions should certain strains be employed. This Area of Interest is not focused on engineering a better cultivation system.

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For both Areas of Interest, selected projects will support the development of at least one novel tool, technique (method), or dataset that upon completion of the project will enable developers to accelerate innovation in that topic area. The types of tools, techniques, and datasets of interest span biological, computational, and analytic strategies that will advance the state of technology and are complementary to the scope of improvement development work.

EERE envisions awarding multiple financial assistance awards in the form of cooperative agreements. The estimated period of performance for each award will be approximately 36 months.

This Notice is issued so that interested parties are aware of the EERE's intention to issue this FOA in the near term. All of the information contained in this Notice is subject to change. EERE will not respond to questions concerning this Notice. Once the FOA has been released, EERE will provide an avenue for potential Applicants to submit questions.

EERE plans to issue the FOA on or about December 2016 via the EERE Exchange website <https://eere-exchange.energy.gov/>. If Applicants wish to receive official notifications and information from EERE regarding this FOA, they should register in EERE Exchange. When the FOA is released, applications will be accepted only through EERE Exchange.

In anticipation of the FOA being released, Applicants are advised to complete the following steps, which are **required** for application submission:

- Register and create an account in EERE Exchange at <https://eere-exchange.energy.gov/>. This account will allow the user to register for any open EERE FOAs that are currently in EERE Exchange. It is recommended that each organization or business unit, whether acting as a team or a single entity, use only one account as the contact point for each submission.

Questions related to the registration process and use of the EERE Exchange website should be submitted to: EERE-ExchangeSupport@hq.doe.gov

- Obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number (including the plus 4 extension, if applicable) at <http://fedgov.dnb.com/webform>
- Register with the System for Award Management (SAM) at <https://www.sam.gov>. Designating an Electronic Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in SAM registration. Please update your SAM registration annually.
- Register in FedConnect at <https://www.fedconnect.net/>. To create an organization account, your organization's SAM MPIN is required. For more information about the SAM MPIN or other registration requirements, review the FedConnect Ready, Set, Go! Guide at

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https://www.fedconnect.net/FedConnect/Marketing/Documents/FedConnect_Ready_Set_Go.pdf

- Register in Grants.gov to receive automatic updates when Amendments to a FOA are posted. However, please note that applications will not be accepted through Grants.gov. <http://www.grants.gov/>. All applications must be submitted through EERE Exchange.

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